

REMARKS

Claims 41-91 are active. Claims 12-23 and 25-30 have been withdrawn from consideration. New Claim 41 tracks and finds support in original Claim 1. As discussed Claim 41 has been directed to polynucleotides further characterized structurally (i.e., “at least 95% identical to”) and functionally (“having an activity of the ribosomal S12 protein”). Support for the structural limitations is found in the specification at page 5, lines 21-32, page 8, lines 11-page 9, line 2, and for the S12 functional activity on page 2, line 18, page 3, line 29, page 5, line 29, and page 8, lines 21-*et seq.* Moreover, the Applicants submit herewith a technical document published prior to the filing date of the present application entitled “Ribosomal protein S12 signature” describing the known characteristics of the S12 protein. Claims 42-45 and 51-54 also find support as described above. New Claim 46, directed to cross-hybridizing polynucleotides, finds support in the specification on page 9, starting on line 19. Claim 47, directed to sequences comprising SEQ ID NO: 1, finds support in original Claim 5. Claim 48, directed to RNA, tracks and finds support in original Claim 4. Claims 49-50 and 55-58, directed to specific variants, find support in original Claims 31-35 and in the specification on page 11, starting at line 26-page 12. Claims 59-61, directed to vectors, find support as discussed above for the polynucleotide sequences and starting in the specification on page 10, line 30-page 11, line 25, for vectors. The cells of Claims 62-80 find support in original Claims 9, 10, 24 and 36-40 and also in the specification on page 6, lines 18-page 7, line 14, page 10, lines 30-31, page 11, lines 6-25 and in the Examples. Claim 81 finds support in original Claim 11. Process Claims 82-87 find support in original Claims 12-20 and the Applicants request that these claims be rejoined to the elected group upon an indication of allowability for the claims directed to the host cells. Claims 88-91, directed to segments of SEQ ID NO: 1, or its full complement, find support in original Claim 1 and on

page 9, lines 9-17, of the specification. Accordingly, the Applicants do not believe that any new matter has been introduced.

The Applicants thank Examiner Hutson for the helpful and courteous interview of September 17, 2003. Editorial amendments to address the claim objections and the indefiniteness rejections were discussed. Functional and structural limitations were discussed which would help address the description/enablement rejections as well as address the prior art rejections. As suggested, the Applicants provide herewith a scientific publication published prior to the present application's filing date further describing the characteristics ribosomal protein S12. The Applicants we also encouraged to perfect their deposit of strain DM 1545, deposited as DSM-13992. The above amendments track the changes discussed during the interview. Accordingly, favorable consideration is now requested.

RESTRICTION

The Applicants note that the Restriction Requirement has been made Final. Claims 12-23 and 25-30 have been withdrawn from consideration. The Applicants respectfully request that these claims be rejoined upon an indication of allowability for the claims of the elected group, see M.P.E.P. § 821.04.

CLAIM OBJECTIONS

Claims 6 and 7 were objected to for various informalities. These objections are moot in view of the amended claim language.

REJECTION – 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 1-11, 24 and 31-40 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. These rejections are moot in view of the cancellation of these claims. The

Applicants provide herewith a scientific publication describing the characteristics of ribosomal protein S12.

REJECTION – 35 U.S.C. § 112, FIRST PARAGRAPH

Claims 1-4, 6, 7, 9, 10, 24 and 31-40 were rejected under 35 U.S.C. § 112, first paragraph as lacking adequate description. The Applicants submit that these rejections are moot in view of the cancellation of these claims and submit that it would not apply to the new claims, which characterize the claimed polynucleotides both structurally (i.e., “at least 95% identity” or by reciting specific hybridization conditions) and functionally (i.e., “having an activity of the ribosomal S12 protein”).

REJECTION – 35 U.S.C. § 112, FIRST PARAGRAPH

Claims 1-4, 6, 24 and 31-40 were rejected under 35 U.S.C. § 112, first paragraph, as lacking enablement. This rejection is moot in view of the cancellation of these claims. The Applicants submit that these rejections would not apply to the new claims, which characterize the claimed polynucleotides both structurally (i.e., “at least 95% identity” or by reciting specific hybridization conditions) and functionally (i.e., “having an activity of the ribosomal S12 protein”).

REJECTION – 35 U.S.C., FIRST PARAGRAPH

Claim 11 was rejected under 35 U.S.C. § 112, first paragraph, as lacking adequate description or enablement. The Applicants submit this rejection is moot in view of their perfection of the deposit requirement. Strain DM1545 was deposited as DSM 13992 under the terms of the Budapest Treaty. As required by 37 C.F.R. § 1.808, subject to the one exception permitted by a 37 C.F.R. § 1.808(b), are restrictions imposed by the depositor on

the availability to the public of the deposited material will be irrevocably removed upon granting of the patent. See M.P.E.P. § 2410.01.

REJECTION – 35 U.S.C. § 102

Claims 1-4, 6, 7, 9, 10 and 24 were rejected under 35 U.S.C. § 102(a) as being anticipated by Nakagawa (“Satouchi et al.”), EP 1 108 790, (Ref. AP). The Applicants submit that this rejection is moot in view of the cancellation of these claims. It would not apply to the new claims which are directed to polynucleotides which have at least **95%** identity with a sequence encoding SEQ ID NO: 2 or which encode a polypeptide which is at least 95% identical to SEQ ID NO: 2. The amino acid sequence of Nakagawa has an overall query match with the sequence of the present invention of only **90.8%**.

REJECTION – 35 U.S.C. § 102(b)

Claims 1-3, 6 and 7 were rejected under 35 U.S.C. § 102(b) as being anticipated by Nair et al., Nucleic Acids Research 21:1039, Reference AB. The Applicants submit this rejection is moot in view of the cancellation of these claims. It would not apply to the new claims which are directed to polynucleotides which have at least **95%** identity with a sequence encoding SEQ ID NO: 2 or which encode a polypeptide which is at least 95% identical to SEQ ID NO: 2. The amino acid sequence of Nair has only a best local similarity score of 91.3% with SEQ ID NO: 2 and an overall query match of only **84.0%**.

CONCLUSION

In view of the above amendments and remarks, the Applicants respectfully submit that this application is now in condition for allowance. Early notification to that effect is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Thomas Cunningham

Customer Number
22850

Jean-Paul Lavalleye
Attorney of Record
Registration No. 31,451

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/03)

Thomas M. Cunningham, Ph.D.
Registration No. 45,394